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(54) **NANOPARTICLES FOR PROTEIN DRUG DELIVERY**

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(51) **Int. Cl.**

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(58) **Field of Classification Search** ..... 424/501,  
424/1.69, 1.73  
See application file for complete search history.

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(57) **ABSTRACT**

The invention discloses the nanoparticles composed of chitosan, poly- $\gamma$ -glutamic acid, and at least one bioactive agent characterized with a positive surface charge and their enhanced permeability for paracellular drug delivery.

**18 Claims, 14 Drawing Sheets**